Walleye On the Fast Track

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Walleye fry and fingerlings have been stocked extensively in Iowa for at least five decades. The traditional approach has been to stock tiny, newly hatched walleye directly into lakes and rivers. It wasn't until about 1995 that a new tact was taken in walleye stocking. For example, at Rathbun Lake some of the walleye fingerlings were stocked into the smaller feeder streams and creeks that drain directly to the Lake.

The 11,000 acre lake is fed by a 354,000 acre watershed and many miles of small rivers and streams. These small tributary streams contain extremely abundant populations of minnows, chubs and other small fish. Walleye fingerlings stocked into these natural rearing areas can gorge themselves on the minnows. This abundant supply of food can produce some of the fastest growth rates for small walleye found anywhere in Iowa. For example, in 1997, 2-inch walleyes were stocked in early July. Within three months these fish had grown to 8 inches in length. These fish were 2 inches longer than those stocked directly in the lake and the difference in growth was simply due to the availability of food.

Not only do the stream-stocked walleye grow faster, but the streams also contain very few predators that could feed on young walleye. Our study of the stream fish communities before the walleyes were stocked showed 97% of the stream fish were forage fish or fish the young walleye could eat. The remaining 3% were predators, such as largemouth bass and white crappie.

We have determined growth of the stream-stocked walleye is very good but we have yet to determine survival of these fish. We are attempting to determine survival of these fish by marking stream-stocked walleye with a chemical known as Oxytetracycline (OTC). Boney structures of walleyes captured in the fall are examined for the fluorescent mark (OTC) through a series of microscopes, filters, and special lights. A comparison of marked walleye (stream-stocked) to unmarked walleye (lake-stocked) will help us determine how many fish survive and how many make it downstream and into Rathbun Lake where they can be caught by anglers.

Our first attempts to improve stream walleye populations through the introduction of fingerling fish were in river systems in northeast Iowa. These efforts produced excellent populations of fast growing walleye. However, the results of stockings in small tributary streams similar to those in the Rathbun watershed is not known, and may be more boom/bust dependent upon spring/summer stream flows. Our research will determine if fingerling walleye stocked in tributary streams above a large reservoir is beneficial to the reservoir walleye fishery.